The British Columbia Science and Technology Fund

SCIENCE AND TECHNOLOGY ACTION PLAN — (STAP)

GUIDELINES FOR ACTION

Province of British Columbia,
Ministry of Advanced Education,
Training and Technology

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The British Columbia

Science and Technology Action Plan

(STAP)

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Advanced Education, Training
and Technology

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Chapter 1

INTRODUCTION

The value of science and technology in enhancing our quality of life, in generating wealth and in improving services, is generally understood. A great deal of effort is already being channeled toward increasing the application of science and technology throughout government and the private sector in British Columbia. More effort, however, is required.

The Science and Technology Action Plan (STAP), is an initiative designed to increase the understanding of the value of technology in improving the service and quality of what we do, while at the same time approaching the solutions in a way that optimizes the economic development in the Province.

To encourage networking and venturing the Ministry of Advanced Education, Training and Technology (MAETT), in cooperation with the Science Council of British Columbia and the British Columbia Purchasing Commission, is offering support to ministries as they involve themselves in the STAP initiative. The plan is also recognized by Service Quality B.C. as an important mechanism to support their work.

It is expected that through the B.C. Purchasing Commission's linkages with the private sector, additional resources can be directed toward this effort. STAP is a powerful networking tool designed to bring together and optimize the use of existing mechanisms.

The importance of technology is also reflected in the Employee Suggestion Award Program. Special recognition goes to suggestions utilizing science and technology applications.

As a further step towards easing the problems of implementation, STAP offers the potential for funding support.

Funding is available under certain conditions, to assist in the implementation of approved initiatives to ensure maximum effort is placed on accelerating the application of technology.

Guidelines for funding support of projects conducted within the framework of the Science and Technology Action Plan are outlined in this document. MAETT has teamed with the B.C. Purchasing Commission to bring existing funding mechanisms, as well as new initiatives, to help with the costs of applying science and technology in the Province. Funding is potentially available from the Science and Technology Fund and through a pilot program, the Government Advanced Technology Purchasing Program, which is being administered by the B.C. Purchasing Commission. The Commission, through the Supplier Development Program, also facilitates high technology development and through the Technology Commercialization Program identifies technologies developed within government which can be commercialized.

The STAP initiative is initially directed at Ministries within the Government of British Columbia, but the intention is to expand to Institutions and then the private sector within British Columbia.

Chapter 2

RATIONALE

British Columbia's continued ability to compete in the world marketplace depends a great deal on its commitment to science and technology. Industry, government and the educational institutions must innovate. This means industrial research and development and investment in new products and processes. The role of government is to assist industry and educational institutions by providing leadership, coordination and funding.

Two elements critical to the use of science and technology for economic development are a vision and a well defined strategy for achieving that vision. The Province is fortunate that these are clearly laid out in the 20-year vision for the Province, and the Science and Technology Policy, presented in the document entitled Strategies for Innovation.

This vision and policy were adopted by Cabinet in 1988 as the basis for building a knowledge based economy in British Columbia. All the activities of the Science and Technology Fund will support the policy and move us towards the vision.

Chapter 3

THE CHALLENGE

"The challenge is a management challenge — What opportunities are there for us to do something better, cheaper, faster? What are the problems and frustrations that we have, what are the kinds of things for which we can get a quantum jump over what we now have for which technology can be part of the solution?"

"At the early stages of STAP, we shouldn't be looking at technology, we should be looking at generic and specific challenges and opportunities, as well as how can we use what we have far more effectively than we now do."

Gary Mullins
Deputy Minister
Advanced Education, Training and Technology

Chapter 4

A SOLUTION

In many cases the solution is knowledge, new processes, new techniques and new technologies.

Government has increased its commitment to science and technology. In addition to creating the Premier's Advisory Council on Science and Technology and adopting a Policy for Science and Technology, government has increased the funding available for research and development and the application of technology. It has made significant commitments towards increasing educational opportunities through the "Access For All" program.

Much effort throughout government has been directed toward increased economic diversification and increased value being added to our resources. Technology has been playing an increasingly important role in this work. For example, the B.C. Purchasing Commission has been facilitating high technology manufacturing and supplier development in all sectors, and new information systems have found their way into most ministries.

But more is required if we are to sustain and improve our quality of life. Innovation is the key mechanism. The Science and Technology Action Plan is one such mechanism. It provides a means of moving from policy to project without being encumbered with a lot of process.

Chapter 5

THE SCIENCE AND TECHNOLOGY FUND

The Science and Technology Fund provides for assistance to:

- support research and development;
- promote public awareness of science and technology;
- support infrastructure and human resources for science and technology;
- encourage growth of advanced technology, and
- provide funding for special projects.

Principles

All activities undertaken through the fund will be conducted in accordance with the principles of effectiveness, flexibility, fairness, delegation, consultation, building on existing strengths, complementarity, and market pull.

Objectives

The objectives of the fund are to:

- improve service, quality, and economic performance;
- assist in diversifying the economy;
- enhance competitiveness in new technologies and traditional industries;
- help create new export industries, and
- emphasize technologies that promote a clean environment and quality of life.

(For additional detail, one is referred to the Ministry document,
"A FRAMEWORK FOR ACTION, *August 1990")*

Chapter 6

SCIENCE AND TECHNOLOGY ACTION PLAN (STAP) OUTLINE

The Science and Technology Action Plan is designed to bring about a cultural change throughout government, throughout educational institutions, throughout industry and ultimately throughout society. Its objective is to have all segments of the British Columbia society understand the transforming power and benefits of science and technology.

It is an initiative designed to increase the understanding of the value of technology in improving the service and quality of what we do, and to use that knowledge in seeking and implementing technological solutions.

An objective is to have government lead the way by introducing the science and technology policy into the operating plans and programs of all ministries.

Funding is available under certain conditions, to assist Ministries in the implementation of these initiatives as Science and Technology Action Projects (STAPs).

"TOGETHER IT WILL HAPPEN"

It is important to create an ongoing dialogue and action in the ministry in order to ensure science and technology is built into the operational plans and programs of the ministry.

It has the support of the Premier and of the Cabinet, it has the support of your Minister. It needs commitment and endorsement at all levels within your Ministry.

Chapter 7

STAP — THE PROCESS

It starts with **MANAGEMENT COMMITMENT**, but it requires **AWARENESS** by everyone of the need for improved economic performance and the value of science and technology as a tool to achieve it. It requires an **ORGANIZATION** within the ministry and an understanding of **ACCOMPLISHMENTS** to date for identifying potential opportunities for tomorrow. There is a need for **EDUCATION** so all involved have the skills required to implement the plan and apply technology to meet their needs.

GOALS for improvement have to be set and posted for all to see, and **OPPORTUNITIES NEED IDENTIFICATION** — this is an ongoing process. You will require **INCENTIVES** to encourage involvement and you may need some **ASSISTANCE**. You will need a basic procedure for **IMPLEMENTATION** of ideas, to provide **RECOGNITION** for your successes, and finally a mechanism for **MEASURING** the successes.

Your ministry must take the lead. You start by appointing a Science and Technology Action Champion and follow by organizing a small STAP team (Task Force) to support the effort. The Champion will chair the Task Force. The team begins by recognizing a problem, which may be a ministerial need or a sector/ministerial need. Agreement is required on the need for action, and that action must be supported by a game plan. The team then develops the STAP projects.

A discussion paper is prepared outlining the proposed initiative and it is discussed with STAP personnel. The following section on determining priorities will assist in this work. When it is agreed the proposed initiative meets the requirements for consideration as a STAP project, the ministry completes development of the initiative.

The initiative must have the endorsement and support of the Deputy Minister(s) and be submitted to MAETT-STAP by the Deputy Minister.

MAETT-STAP will review the proposal and, if approved, the ministry will be advised of the funding assistance. Thereafter the ministry may begin implementation.

The user Ministry/Ministries assume responsibility for the initiative and champion its implementation. They are also responsible for measuring the savings or improvement and reporting these to MAETT-STAP at regular intervals.

Chapter 8

DETERMINING STAP PRIORITIES

Since the program is designed to foster innovation and venturing, it recognizes that each project may be different. Hence the following guidelines are general and are designed to facilitate preparing the initial discussion paper and the final submission.

These considerations will assist in determining priorities in order to ensure an accelerated application of technology to solving problems and meeting needs. STAP is a facilitator.

- Proposals must reduce the cost of government and/or provide increased efficiencies in ministry operations or service.
- Participation of the private sector is considered important (networking) to optimize economic development in British Columbia. A financial commitment to the initiative by all partners will be given preference.
- The sponsoring ministry must be prepared to commit ministry funding to the project. The amount of ministry dollars committed to each proposal will depend on the specific circumstances of the project (eg. risk, size, term).
- Initiatives of benefit to more than one ministry are preferred.
- Proposals will be subject to a peer review in the approval process.

Important factors influencing project priorities are:

- An identified market pull, therefore they will be evaluated on the potential for broad commercial applicability, import replacement, export potential, regional development or environmental benefit.
- Commitment to reinvesting savings in further technological implementation.
- Proposals must be results oriented, with results that are measurable and reportable.

Chapter 9

GETTING STARTED

If you require additional information to get started or would like further discussion regarding the STAP program please contact the Ministry of Advanced Education, Training and Technology at one of the following numbers:

VANCOUVER	987-7995

VICTORIA	356-0678

STAP PROCESS IN THE MINISTRY CHECKLIST

1. MANAGEMENT COMMITMENT
2. AWARENESS
3. ORGANIZATION
4. ACCOMPLISHMENTS
5. EDUCATION
6. OPPORTUNITY IDENTIFICATION
7. INCENTIVES
8. ASSISTANCE
9. IMPLEMENTATION
10. RECOGNITION
11. MEASUREMENT

STAP PROJECTS (INITIATIVES) CHECKLIST

1. STAP Champion appointed
2. STAP Task Force in place
3. Projects proposed
4. Project outline to MAETT-STAP
5. MAETT-STAP recommendation to proceed
6. Ministry develops proposal
7. Deputy Minister approves proposal and forwards to MAETT
8. MAETT-STAP reviews proposal
9. MAETT peer review
10. MAETT-STAP approves proposal
11. Ministry STAP initiates project
12. Ministry STAP evaluates project
13. Ministry STAP reports on savings and benefits
14. Ministry reinvests savings in new project

MEASURES FOR A SUCCESSFUL STAP PROCESS WITHIN THE MINISTRY

- The Deputy Minister receives periodic reports on the progress of STAP within the Ministry.
- STAP progress reports are a regular item on the Executive Committee agenda.
- The STAP committee meets regularly.
- The STAP committee initiates a constant flow of initiatives for review and recommendation.
- Previous STAP initiatives are periodically reviewed for benefit analysis.
- The ministry reinvests savings from previous STAP initiatives in new STAP projects.